RECNOTES
RECREATION RESEARCH PROGRAM
U.S. ARMY ENGINEER WATERWAYS EXPERIMENT STATION

VOL R-82-2 U. S. ARMY CORPS OF ENGINEERS INFORMATION EXCHANGE BULLETIN Sept 1982

The simple management method of controlling visitor access by constructing a fee-collection station may significantly reduce visitor safety and security problems at recreation areas. This management technique is currently being field tested at Somerville Lake as a part of Recreation Research Program (RRP) research.

VISITOR SAFETY AND SECURITY DEMONSTRATION SOMERVILLE, TEXAS

*James E. Fletcher**

In 1978, the Office, Chief of Engineers, established the Recreation Research and Demonstration System (RRDS). The purpose of the RRDS is to develop a common database for research, planning, and management and to demonstrate and evaluate research findings and management techniques. The RRDS includes 24 Recreation Research and Demonstration Units (RRDU). Somerville Lake, located in east-central Texas, is the site of the first demonstration in the RRDS.

Four years ago, the RRP initiated a research work unit on safety and security problems at Corps recreation areas. One phase of the work unit involved an inventory and analysis of crimes and accidents at selected projects. Once specific problems were identified, various planning, design, and management techniques to alleviate the problems were sought. This article describes the management technique of using a controlled visitor-entry point to improve visitor security at recreation areas. The controlled-access technique is being field tested at Somerville Lake. Results of the demonstration will be analyzed and made available to all Corps elements.

In the summer of 1980, a three-year field study was initiated at Lake Somerville to investigate safety and security conditions and to systematically evaluate management approaches that address identified problems. The objectives of the study are:

- Identify and describe the types and numbers of safety and security problems that park users are experiencing at the lake.

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- Determine how the problems affect perceptions of safety and security in the parks.
- Assess how the problems affect visitor use and enjoyment of the parks.
- Identify and test managerial alternatives that may be effective in reducing actual as well as perceived safety and security problems.

During the summers of 1980 and 1981, park visitors were randomly selected and asked to complete a survey questionnaire designed to identify actual and perceived safety and security problems as well as recreation use patterns. A total of 629 visitors were surveyed during the summer of 1980 and another 504 were surveyed in 1981.

Originally surveys were conducted in the five Corps-operated parks and in the two state-operated parks at Somerville Lake to provide data for comparing perceptions of visitors in parks with law-enforcement personnel on duty (state parks) with perceptions of visitors in parks without commissioned law-enforcement personnel (Corps-operated parks). Initial survey results showed that the park visitor's perception of safety varies between fee and non-fee areas rather than being a difference in the presence or absence of law-enforcement personnel.

Preliminary findings from the 1980 and 1981 data indicate that the five parks that require the payment of a use fee (two state-operated parks and three Corps-operated parks), which, in essence, channels everyone through a central checkpoint when entering the park, are perceived by visitors to be significantly safer and more secure than the two parks that do not charge a fee and thus have unrestricted access. Data on actual crimes that occurred in the parks and were reported during the study period clearly showed that the ratio of number of crimes to number of visitor days of use was much lower in the five fee parks than in the two non-fee parks.

Analysis of visitor responses on the questionnaire also demonstrated that more than twice as many respondents perceived crime to be a problem than had actually experienced a criminal incident. Eighty percent of the visitors were repeat rather than first-time users and knew other visitors with whom they often discussed experiences with safety or security problems in the parks, therefore, even if a visitor does not have first-hand experience, crime can have a significant impact on perceived safety and security in a particular park.

Of the eight crimes about which survey respondents were asked to reveal their perceptions (Table 1), disturbing the peace, driving while intoxicated, and theft were perceived to be either a minor or a major problem by more than 30 percent of the people surveyed. A significantly greater percentage of the visitors surveyed in non-fee parks perceived these to be problems than visitors surveyed in fee parks.

Table 1

Visitor Perceptions of Crime in Somerville Lake Parks

	Level of Problem—Frequency (% of Total)		
Type of Crime	*Not a Problem*	*Minor Problem*	*Major Problem*
Theft	306 (68.0)	113 (25.1)	31 (6.9)
Vandalism	329 (72.6)	100 (22.1)	24 (5.3)
Assault	388 (86.2)	49 (10.9)	13 (2.9)
Holdup	388 (86.8)	48 (10.7)	11 (2.5)
Disturbing the peace	261 (57.6)	135 (29.8)	57 (12.6)
Sexual assault	399 (88.7)	40 (8.9)	11 (2.4)
Sexual indecency	389 (86.3)	47 (10.4)	15 (3.3)
Driving while intoxicated	267 (60.3)	116 (26.2)	60 (13.5)

Visitor perceptions regarding crime as measured by the survey responses were found to be accurate based on park crimes reported to area law-enforcement agencies. Of the respondents, 23.1 percent indicated that they had experienced a crime or accident during a visit at Somerville Lake. Of these, 74.8 percent were problems with disturbing the peace. A surprising 56.8 percent of the crimes reported in the survey were alleged to have occurred in the two non-fee parks, while the remaining 43.2 percent occurred in the five fee parks (the trend was expected to be related to the presence or absence of law-enforcement personnel).

The 1981 data on crimes at Somerville Lake as reported to Federal, state, and local agencies, revealed 102 separately reported incidents. Of these, 34.4 percent occurred in the two non-fee parks. Furthermore, survey responses indicated that the two non-fee parks had a higher number of incidents (43.2 percent) reported to law-enforcement authorities than did the five fee parks (Figure 1). Based on incident problems reported by respondents in the visitor survey, incidents may be under-reported at non-fee parks. Many survey respondents indicated that they had not reported an incident which they had experienced, such as theft of items worth less than $50 or disturbing the peace, because they felt that it was too much trouble or did not know to whom to report the incident.

Since the controlled-access fee parks at Somerville Lake have a significantly lower crime rate than non-fee parks, the major thrust of the study will be to implement managerial changes in the non-fee parks and to collect survey data to measure the impacts of those changes on perceived and actual visitor safety

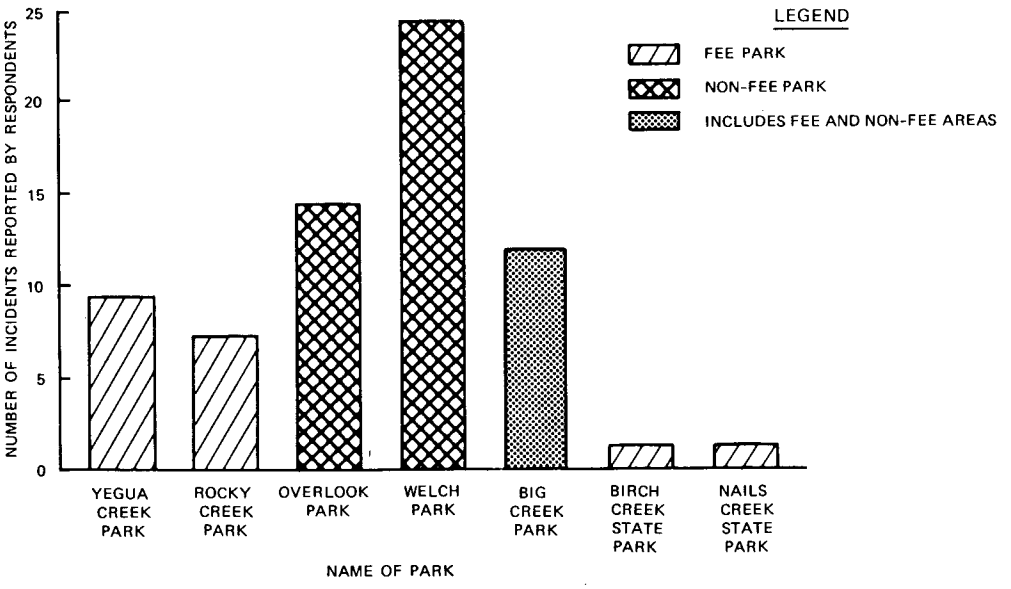

Figure 1. Location by park of problems experienced by survey respondents

and security in those parks. Data will continue to be collected in the five fee parks as well in order to measure any changes in perceptions of safety and security that are due to factors other than the managerial changes.

The first managerial change to be tested is the conversion of Overlook Park from a non-fee to a fee campground with controlled access and gate attendant. Data from park-user surveys and incident reports were collected during the summer of 1982 to evaluate the impact of this change on actual and perceived crime in Overlook Park. In addition, the data should give an indication of any displacement of visitors and incidents from Overlook Park to any of the other parks at Somerville Lake.

Additional managerial changes directed at addressing visitor safety and security problems may be implemented and monitored through data collection during the summer of 1983 at Somerville Lake. As part of the study, the applicability of managerial changes tested in the parks at Somerville Lake will be evaluated for potential application in Corps parks at other projects around the United States.

RRP DIVISION/DISTRICT CONTACTS

RECNOTES vol R-82-1 (March 1982) included a listing of the RRP Division/District contacts. The following name should be added for the Jacksonville District to replace Charles Smith/SAJEN-E.

Joe Joyce/SAJCO-OR FTS 946-2215

NEW PUBLICATIONS POLICY

Most effect for money invested — We will publish summaries of major research accomplishments highlighting conclusions and recommendations rather than publishing and distributing technical reports. Complete technical information will be kept on file at the Waterways Experiment Station. We will continue to publish full texts of instruction reports, handbooks, and miscellaneous papers.

INTERPRETATION FOR MANAGEMENT

Interpretation can be used to address project management objectives. Two studies conducted during the summer of 1981 proved interpretation effective in reducing depreciative behavior and increasing compliance with boating safety rules.

A simple three-fold brochure was used to communicate a message on tree damage and littering to campers at John H. Kerr Dam and Reservoir (Wilmington District). The brochure itself was successful in reducing these problems by about 50 percent. When the brochure was supplemented by a brief personal message from Park Rangers requesting camper cooperation, tree damage and litter were reduced by approximately 80 percent.

A variety of interpretive materials were used to address boater safety at Detroit Lake (Portland District). These included posters, flyers, decals, signs, radio broadcasts via short-range message repeaters, and a newspaper. The materials proved effective in increasing compliance with lake safety markers. In marked danger zones, the total number of boats decreased by 22 percent, the number of speedboats decreased by 53 percent, and the number of boats with water-skiers decreased by 77 percent. In this study, posters and signs reached the largest number of visitors.

These two studies indicate that interpretation *can* be used as a tool to help solve management problems. However, success seems to depend on the message, the media, and the situation. The problem and potential audience should be carefully analyzed to ensure that the most effective strategy is used. To determine effectiveness, the interpretation program must be evaluated.

Complete information from these studies will be published in "Interpretation for Management," a supplement to Instruction Report R-81-1 entitled "A Guide to Cultural and Environmental Interpretation in the U.S. Army Corps of Engineers."

This bulletin is published in accordance with AR 310-2. It has been prepared and distributed as one of the information dissemination functions of the Environmental Laboratory of the Waterways Experiment Station. It is primarily intended to be a forum whereby information pertaining to and resulting from the Corps of Engineers' nationwide Recreation Research Program can be rapidly and widely disseminated to OCE and Division, District, and project offices as well as to other Federal agencies concerned with outdoor recreation. Local reproduction is authorized to satisfy additional requirements. Contributions of notes, news, reviews, or any other types of information are solicited from all sources and will be considered for publication as long as they are relevant to the theme of the Recreation Research Program, i. e., to improve the effectiveness and efficiency of the Corps in providing recreation opportunity at its water resource development projects. This bulletin will be issued on an irregular basis as dictated by the quantity and importance of information to be disseminated. Communications are welcomed and should be addressed to the Environmental Laboratory, ATTN: A. J. Anderson, U.S. Army Engineer Waterways Experiment Station, P.O. Box 631, Vicksburg, Mississippi 39180, or call AC 601, 634-3657 (FTS 542-3657).

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